CMOS IMAGE SENSOR USING SHARED TRANSISTORS BETWEEN PIXELS

ABSTRACT OF THE DISCLOSURE

A CMOS image sensor that has reduced transistor count is disclosed. The individual pixels are formed by a pinned photodiode and a transfer transistor. An output node receives the signal from the photodiode via the transfer transistor. The output node is shared between multiple pixels. Further, a reset transistor is coupled between a selectable low voltage rail V_{ss} or a high voltage reference V_{ref} and the output node. The gate of an output transistor is then coupled to the output node. Both the reset transistor and output transistors are shared between multiple pixels.